

ABSTRACT

A communication system has a high altitude communication device that has an antenna for directing beams to a fixed cell pattern with a polarity of cells. A specific pattern of cells having the same communication resource is provided. Preferably, cells having the same resource are separated. The antenna is shaped to suppress interference with locations having the same resource. The areas not having the same resource are not suppressed to allow the system to have maximum capacity and allow a smaller antenna aperture.

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